

No.

200200263



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

NASH Research Foundation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEEDS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Nornatto'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this tenth day of April, in the year two thousand three.

Attest:



Commissioner

Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER NDSU Research Foundation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME ND97-1120		3. VARIETY NAME Nornatto	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 1735 NDSU Research Park Drive PO Box 5002 Fargo, ND 58105-5002		5. TELEPHONE (include area code) (701) 231-8931		FOR OFFICIAL USE ONLY	
		6. FAX (include area code) (701) 231-6661		PVPO NUMBER 200200263	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) 501 (C) 3		8. IF INCORPORATED, GIVE STATE OF INCORPORATION North Dakota		FILING DATE 9/11/2002	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)				FILING AND EXAMINATION FEES: \$ 2,705.00 DATE 9/11/2002 CERTIFICATION FEE: \$ 432.00 DATE 4/4/2003	
Theodore C. Helms Dept. of Plant Sciences North Dakota State University Fargo, ND 58105-5051		Dale Zetocha Executive Director NDSU Research Foundation 1735 NDSU Research Park Drive PO Box 5002 Fargo, ND 58105-5002			
11. TELEPHONE (Include area code) (701) 231-8136	12. FAX (Include area code) (701) 231-8474	13. E-MAIL ted.helms@ndsu.nodak.edu dzetocha@ndsuent.nodak.edu		14. CROP KIND (Common Name) soybean	
15. GENUS AND SPECIES NAME OF CROP Glycine max		16. FAMILY NAME (Botanical) Leguminosae		17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety		<input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22)			
b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO			
c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety		IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED			
d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional)		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership		IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc.			
f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)		(If additional explanation is necessary, please use the space indicated on the reverse.)			
g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)					
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)			
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER Dale Zetocha		SIGNATURE OF OWNER			
NAME (Please print or type) DALE ZETOCHA		NAME (Please print or type)			
CAPACITY OR TITLE Executive Director		DATE 9/9/02		CAPACITY OR TITLE	
NDSU Research Foundation				DATE	

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvp.htm>

ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

First sold as Foundation Seed April 2, 2002 in the U.S.

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotope, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

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Exhibit A**Origin and Breeding History of the Cultivar Nornatto**

Nornatto, tested as ND no., 97-1120, was derived from the cross Danatto/M87-948 that was made in 1994. M87-948 is an experimental line developed by the University of Minnesota, St. Paul, MN that was never released as a named cultivar. The pedigree of M87-948 is Chico/PI 437296. The cross was made in the summer of 1994 at Casselton, ND. The F_1 plant was grown in the 1994-1995 Chile, S.A. winter nursery. The F_2 seed was grown in the summer of 1995 and advanced to the F_3 generation by the single-pod bulk method. The F_3 population was grown in the 1995-1996 Chile winter nursery. F_4 plants from the segregating population were grown in the summer nursery located at Fargo, ND in 1996 and threshed in the fall of 1996. $F_{4.5}$ plant-rows were evaluated and selected in the 1997 Casselton, ND nursery. ND97-1120 was first tested in replicated yield trials in 1998. Individual $F_{4.7}$ plants were threshed in the fall of 1999 and 88 single plant selections were evaluated for uniformity in the summer of 2000 at Casselton and Fargo, ND nurseries. Of the 88 purification rows that were evaluated, 14 were discarded and the remaining 74 rows were individually harvested and bulked after selection for hilum color, plant maturity, flower color, plant height, seed size, pubescence color, seed coat luster and color, and pod color. Breeder seed of ND97-1120 was increased in the 2000-2001 Chile winter nursery. In the summer of 2001 the Foundation seed of ND97-1120 was increased at Casselton and Carrington, ND. Nornatto was released January 17, 2002 as an F_{10} generation pure line soybean cultivar. Nornatto has been observed over a period of two years to be uniform and stable. Variants in 2001 and 2002 include: 5 plants per 10,000 that have grey pubescence, brown pods, and grey hila; 5 plants per 10,000 that have tawny pubescence brown pods, and imperfect black hila; 5 plants per 10,000 that have tawny pubescence, brown pods, and grey hila.

200200263**Exhibit B****Novelty Statement**

1. Nornatto was developed primarily for increased yield, improved lodging resistance, suitable maturity and special characteristics that make this small-seeded cultivar acceptable for the the natto and sprout specialty human food markets.
2. Danatto is the most similar cultivar to Nornatto. Nornatto differs from Danatto at SSR loci satt 367, satt 373, and satt 408.

Biogenetic Services, Inc.
3/10/03

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Summary of Observed Genotypes

Primer	Nomatto	Nannonatto	Danatto
satt 009	22, 23, 33	22	11, 22
satt 038	11	22	22
satt 114	11	11	11
satt 147	22	22	11
satt 157	22	22	11, 22, 33, 44
satt 177	22	22, 33	11, 22
satt 191	11	11	11
satt 228	11	11	11
satt 242	11	22	11
satt 243	11	11	11
satt 291	11	22	11
satt 294	11	11	11
satt 302	11	11	11
satt 367	33	11	11, 22
satt 373	11	22	22
satt 384	11	11	11
satt 385	22	11	11
satt 408	11	22	22
satt 414	11	11	11
satt 420	11	22	12, 22
satt 534	11	11	11

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Farm Approved - OMB No. 0581-0055

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is 0581-0055. The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**EXHIBIT C
(Soybean)**

**OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* (L.) Merr.)**

NAME OF APPLICANT(S) NDSU Research Foundation	PVP NUMBER 200200263
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) PO Box 5014 Fargo, ND 58105-5014	VARIETY NAME Nornatto
	TEMPORARY OR EXPERIMENTAL DESIGNATION (important if one exists) ND97-1120

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box (e.g.

9	9	9
---	---	---

 or

0	9
---	---

) when number is either 99 or less or 9 or less respectively. Data for quantitative

plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

A. MORPHOLOGY

Seed Shape:

2

1 = Spherical
(L/W, L/T, and T/W ratios < 1.2)

2 = Spherical-Flattened
(L/W ratio > 1.2; L/T ratio < 1.2)

3 = Elongate
(L/T ratio > 1.2; T/W ratio < 1.2)

4 = Elongate-Flattened
(L/T ratio > 1.2; T/W ratio > 1.2)

Seed Coat Color:

1

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other
(Please Specify)

Seed Coat Luster:

1

1 = Dull

2 = Shiny

Seed Size:

1	0
---	---

grams/100 seeds

Hilum Color:

2

1 = Buff
6 = Black

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

7 = Other (Please Specify)

A. MORPHOLOGY (Continue)

Cotyledon Color:

1 = Yellow 2 = Green

Seed Protein Peroxidase Activity:

1 = Low 2 = High

Hypocotyl Color:

1 = Green ('Evans' or 'Davis') 2 = Green with Bronze Bands below Cotyledon ('Woodworth' or 'Tracy') 3 = Light Purple below Cotyledons ('Beeson' or 'Pickett 71') 4 = Dark Purple extending to unifoliate leaves ('Hodgson', 'Coker', or 'Hampton 266A')

Leaflet Shape:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Please Specify)

Flower Color:

1 = White 2 = Purple 3 = White with a Purple Throat

Pod Color:

1 = Tan 2 = Brown 3 = Black

Pubescence Color:

1 = Gray 2 = Brown (Tawny) 3 = Light Tawny

Plant Habit:

1 = Determinate 2 = Semi - Determinate 3 = Indeterminate 4 = Intermediate

Maturity Group:

<input type="text" value="0"/>	<input type="text" value="3"/>	1 = 000	2 = 00	3 = 0	4 = I	5 = II
		6 = III	7 = IV	8 = V	9 = VI	10 = VII
		11 = VIII	12 = IX	13 = X	14 = XI	15 = XII

Maturity Subgroup:

Please enter a value from 0 - 9

B. DISEASE REACTIONS

0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Bacterial

Bacterial Pustule (*Xanthomonas campestris* pv. *glycines* (Nakano) Dye)

Bacterial Blight (*Pseudomonas syringae* pv. *glycinea* (Coerper) Young, Dye, & Wilkie)

Wildfire Blight (*Pseudomonas syringae* pv. *tabaci* (Wolf & Foster) Young, Dye, & Wilkie)

Fungal

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Brown Spot (*Septoria glycines* Hemmi)

Frogeye Leaf Spot (*Cercospora sojina* Hara)

race 1

race 2

race 3

race 4

race 5

race 6

Other (Please Specify)

Target Spot (*Corynespora cassicola* (Berk. & Curt.) Wei)

Downey Mildew (*Peronospora trifoliorum* var. *manchurica* (Naum.) Syd. ex Gäum)

Powdery Mildew (*Microsphaera diffusa* Cke. & Pk.)

Brown Stem Rot (*Phialophora gregata* (Allington & Chamberlain) W. Gams.)

Stem Canker (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *caulivora* Athow & Caldwell)

Pod and Stem Blight (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *sojae* (Lehman) Wehm.)

Purple Seed Stain (*Cercospora kikuchii* (T. Matsu. & Tomoyasu) Gardener)

Rhizoctonia Root Rot (*Rhizoctonia solani* Kühn)

Phytophthora Root Rot (*Phytophthora megasperma* Drechs. f. sp. *glycinea* (Kuan & Erwin))

race 1

race 8

race 15

race 22

race 2

race 9

race 16

race 23

race 3

race 10

race 17

race 24

race 4

race 11

race 18

race 25

race 5

race 12

race 19

race 26

race 6

race 13

race 20

Other (Please Specify)

race 7

race 14

race 21

Bud Blight (Tobacco Ringspot Virus)

Yellow Mosaic (Bean Yellow Mosaic Virus)

B. DISEASE REACTIONS (Continued) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Cowpea Mosaic (Cowpea Chlorotic Virus)

Pod Mottle (Bean Pod Mottle Virus)

Seed Mottle (Soybean Mosaic Virus)

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Nematode

Soybean Cyst Nematode (*Heterodera glycines* Ichinohe)

race 1

race 4

race 9

race 2

race 5

race 14

race 3

race 6

Other (Please Specify)

Lance Nematode (*Hoplolaimus columbus* Sher)

Southern Root Knot Nematode (*Meloidogyne incognita* (Kofoid & White) Chitwood)

Northern Root Knot Nematode (*Meloidogyne hapla* Chitwood)

Peanut Root Knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood)

Reniform Nematode (*Rotylenchus reniformus* Linwood & Olivera)

Javanese Nematode (*Meloidogyne javanica* (Treub) Chitwood)

Other Nematode (Please Specify)

C. PHYSIOLOGICAL RESPONSES 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

Iron Chlorosis on Calcareous Soil

Phosphorus

Other (Please Specify) _____

Boron

Aluminum

Salt

Drought

D. INSECT REACTIONS

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

☐Mexican Bean Beetle (*Epilachna varivestis* Mulsant)☐Potato Leaf Hopper (*Empoasca fabae* (Harris))☐

Other (Please Specify)

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E. HERBICIDE REACTIONS

0 = Not Tested

1 = Susceptible

2 = Resistant

☐

Metribuzin

☐

Sulfonyleurea

☐

Glyphosate

☐

Glufosinate

☐

Sulfentrazone

☐

Other (Please Specify)

F. TRANSGENIC COMPOSITION

Has the development of the subject variety included the insertion of genetic material from an organism other than a soybean, or, the removal of genetic material from the application variety?

If yes, please complete the following information requests*. Use additional pages if necessary.

YES

NO

☐☒

1. Please state the vector's name:

2. Please state the vector components:

3. Please describe the genetic material successfully transferred into the subject variety:

4. Please describe the insertion protocol:

* A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

G. BIOCHEMICAL MARKERS

Please describe any biochemical information here, which you believe will be helpful in further describing the subject variety (e.g. Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

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H. COMMENTS

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) NDSU Research Foundation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER ND97-1120	3. VARIETY NAME 'Nornatto'
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) c/o Executive Director 1735 NDSU Research Park Drive PO Box 5002 Fargo, ND 58105-5002		5. TELEPHONE (include area code) (701) 231-8931	6. FAX (include area code) (701) 231-6661
		7. PVPO NUMBER 200200263	
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
9. Is the applicant (individual or company) a U.S. national or U.S. based company? If no, give name of country <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
10. Is the applicant the original owner? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no, please answer <u>one</u> of the following: a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country			
11. Additional explanation on ownership (if needed, use reverse for extra space): See additional Exhibit E Statement on the Basis of the applicant's ownership included in the application			

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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Exhibit E**Statement of the basis of applicant's ownership**

Dr. Theodore Helms, an employee of the North Dakota Agricultural Experiment Station and North Dakota State University, is the plant breeder who developed 'NORNATTO', the soybean cultivar for which Plant Variety Protection is hereby sought. The employee by agreement and because of the conditions of the use of the facilities and funds of the North Dakota Agricultural Experiment Station and North Dakota State University has assigned all ownership rights to 'NORNATTO' to the North Dakota Agricultural Experiment Station and North Dakota State University.

North Dakota State University on behalf of the North Dakota Agricultural Experiment Station has assigned ownership to the NDSU Research Foundation. The NDSU Research Foundation is a nonprofit corporation set up to own and manage the intellectual property of North Dakota State University.